

PROPOSED TECHNICAL PURCHASE DESCRIPTION (TPD) FOR LIQUID DISHWASHER DESCALER

1. Scope

This technical description (TPD) covers a liquid form of scale removing compound intended for removing scale deposits from environmental surfaces, commercial dishwashing machines, and boiler coils. This compound can be used in laboratories, food handling and process areas, veterinary areas, and dairy plants.

2. Unit of Issue

1. Four (4) one gallon containers per shipping container.
2. Four (4) or Six (6) gallon container per shipping container.

(Suggested units of issue. Other units of issue will also be considered and not limited to the units listed below.)

3. Requirements

3.1 Material

Unless otherwise specified herein, the material shall be in accordance with the manufacturer's material specifications and in accordance with Table I. The compound shall be a uniform liquid, free of sediments and suspended particles, and shall contain a corrosion inhibiting agent and wetting agent.

Table I. Table of Requirements

Material/Property	Range	Test Method
Phosphoric Acid (P ₂ O ₅)	30-40%	ASTM D 820
Citric Acid	>6%	ASTM D 4608
HCl	=10%	Titration
pH	=2.0	ASTM E 70
Nonvolatile matter @ 105°C	≤ 30%	ASTM D2834

3.2 Surface tension

The liquid descaler shall have a surface tension not greater than 8.08×10^{-3} poundals per inch (44.0 dynes per centimeter) when measured in accordance with ASTM D 1331 using a sample at 77°F (25°C) in a 1% aqueous solution.

3.3 Corrosive effect on steel

The liquid descaler shall have a corrosive effect on steel of not more than 0.15% loss of mass on 2 in. X 2 in. X 0.035 in. (51 mm. X 51 mm. X 0.89 mm.) thick coupons of hot rolled steel after a 24 hour period of immersion in the compound.

3.4 Foaming

The liquid descaler shall not exhibit foaming at temperatures above 100°F (38°C).

3.5 Prohibited Materials

3.5.1 Excluded Ingredients

The liquid descaler shall not contain sulfuric acid or organic solvents.

3.5.2 Carcinogens and Toxins

The materials used in the liquid descaler shall not contain any known or suspected human carcinogens in concentrations equal to or greater than 0.1% (by weight) as defined in: Code of Federal Regulations 29 CFR 1910.1000 Series, Occupational Safety and Health Administration (OSHA) Subpart Z Regulated Carcinogens/Toxic and Hazardous Substance List (latest edition); International Agency for Research on Cancer (IARC) Groups 1, 2A, and 2B (latest edition); and the latest annual report of the National Toxicology Program's (NTP) of Known to be Human Carcinogens, and Reasonably Anticipated to be Human Carcinogens.

3.5.3 Reproductive Hazards

The materials used in the liquid descaler shall not contain the following occupational reproductive hazardous chemicals if used in concentrations equal to or greater than 0.1 percent (by weight): acetohydroxamic acid, aminopterin, arsenic, benomyl, benzene, bromoxynil, cadmium, carbon disulfide, carbon monoxide, chlordecone, cyanazine, cycloheximide, cyhexatin, dinocap, dinoseb, 1,2-dibromo-3-chloropropane, m-dinitrobenzene, o-dinitrobenzene, p-dinitrobenzene, epichlorohydrin, ethylene glycol monoethyl ether, ethylene glycol monoethyl ether acetate, ethylene glycol monomethyl ether, ethylene monomethyl ether acetate, ethylene oxide, hexachlorobenzene, hydroxurea, lead, mercury and mercury compounds, methyl bromide, methyl mercury, nickel carbonyl, polybrominated biphenyls, polychlorinated biphenyls, 2,3,7,8-tetrachloro-dibenzo-para-dioxin, toluene, and warfarin and any other chemical species listed in OPNAVINST 5100.23, Chapter 29, Appendix 29-B. The most current version of the instruction can be obtained from the internet website: <http://www.navosh.net>.

3.6 Shelf Life and Maximum Age on Delivery

The product shall have a minimum shelf life of 36 months and be no greater than 5 months from the manufacturing date when received by the supply system.

3.7 Material Safety Data Sheets (MSDSs)

The contracting activity shall be provided a material safety data sheet with each contract bid/proposal or prior to contract award. The MSDS shall be provided in accordance with the requirements of FED-STD-313 and 29 CFR 1910.1200, Hazardous Communication Standard. The MSDS shall be included with each shipment of the material covered by this TPD. The MSDS must be current version for the product.

4. Regulatory Requirements

4.1 Environmental Considerations

The product delivered under this TPD shall be in accordance with the environmental requirements of 40 CFR.

4.1.1 Volatile Organic Compounds (VOCs)

VOC levels of the product must be stated as a % of VOCs by weight when prepared in the dilution ratio as directed on the manufacturer's label and shall not exceed 10% in accordance with 40 CFR parts 9 and 59.

4.2 Recycling

The contractor is encouraged to use recovered materials in accordance with Public Law 94-580 to the maximum extent practicable.

5. Quality Assurance Provisions

5.1 Contractor Certification

The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this TPD and that the product conforms to the producer's own drawings, specifications, standards, and quality assurance practices and is the same product offered for sale in the commercial market place. The Government reserves the right to require proof of such conformance prior to first delivery, and thereafter as may be otherwise provided for under the provisions of the contract.

5.2 Market Acceptability

The following market acceptability criteria are necessary to document the quality of the product to be provided under this TPD:

1. The company furnishing the product must have been producing a product meeting the requirements of this technical purchase description for at least 6 months.
2. The Government reserves the right to require proof of such conformance.

6. Packaging

6.1 Preparation for Delivery

The item(s) shall be packaged and packed in accordance with the latest revision of ASTM D 3951, Standard Practice for Commercial Packaging unless specified in the contract or purchase.

7. Source of Documents

7.1 Copies of the Code of Federal Regulation (CFR) and Federal Acquisition Regulation (CFR) may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington DC, 0402.

Website: <http://www.access.gpo.gov/nara/cf/cfr/cfc-table-search.html>

7.2 Copies of Federal Standards and Specifications may be obtained from the Standardization Document Order Desk, 700 Robbins Avenue. Website: <http://www.dodssp.daps.mil>.

7.3 Copies of ASTM test methods may be obtained from the American Society for Testing and Materials, 100 Barr harbor Drive, West Conshohocken, PA 19428-2959. Website: www.astm.org.

7.4 Copies of the most recent Annual Report on Carcinogens may be obtained from the U.S. Department of Health and Human Services, Public Health Service, National Toxicology Program, P.O. Box 12233, Research Triangle Park, NC 27709. Website: HYPERLINK <http://ntp-server.niehs.nih.gov/NewHomeRoc/AboutRoC.html>

7.5 Copies of all IARC publications are available directly from IARC PRESS, 150 Cours Albert Thomas, F-69372 Lyon cedex 08, France (Fax: +33 472 73 83 02; E-mail press@iarc.fr)

7.6 Copies of Public Law 95-580 "Resource Conservation & Recovery Act" (RCA) may be obtained from Superintendent of Documents, U. S. Government Printing Office, Washington, DC 20402.